IN THE CLAIMS:

1-34. (Canceled)

35. (Currently amended) An implantable multi-chamber pacing system, comprising:

an implantable cardiac rhythm management device including means for sensing atrial signals of a patient's heart and means for sensing ventricular signals of a patient's heart;

a coronary sinus lead adapted to be coupled to the cardiac rhythm management device;

means carried on the coronary sinus lead for producing a signal representative of blood flow velocity through the coronary sinus; and

means within the cardiac rhythm management device for analyzing the sensed ventricular signals, the sensed atrial signals and the coronary sinus blood flow velocity signal <u>to provide an output in response to a decrease in blood flow velocity through the coronary sinus followed by an increase in elevation of an ST segment of a waveform derived from at least one of the sensed ventricular signals and the sensed atrial signals</u>; and

means within the cardiac rhythm management device <u>responsive to the output</u> for delivering therapy to the patient's heart as a function of sensed electrical activity of a patient's heart and coronary sinus blood flow velocity.

36. (Canceled)

37. (Previously presented) The pacing system of claim 35 wherein the analyzing means analyzes the coronary blood flow velocity signal to detect a reduced blood flow velocity indicative of a myocardial ischemia cardiac condition and wherein the therapy delivery means comprises means for dispensing a therapeutic drug when a myocardial ischemia cardiac condition is detected.

38. (Previously presented) The pacing system as described in claim 37, comprising programmer means for programming the implantable cardiac rhythm management device via a wireless telemetry link.

39. (Previously presented) The pacing system as described in claim 37, wherein the implantable cardiac rhythm management device further comprising defibrillation means for generating and providing a defibrillation pulse to the patient's heart.

40. – 51. (Canceled)